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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/047,092	01/17/2002	Hiromichi Atsuumi	218135US2	5733

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EXAMINER

ALLEN, DENISE S

ART UNIT PAPER NUMBER

2872

DATE MAILED: 06/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/047,092

Applicant(s)

ATSUUMI, HIROMICHI

Examiner

Denise S Allen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 April 2004 and 14 May 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 and 19-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 and 19-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 January 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on April 16, 2004 has been entered.

Response to Amendment

The declaration under 37 CFR 1.132 filed April 16, 2004 is sufficient to overcome the rejection of claims 1 – 9 and 19 – 24 based upon Suzuki et al (US 6,509,995) applied under 35 U.S.C. 102(e).

Response to Arguments

Applicant's arguments with respect to claims 1 – 9 and 19 – 24 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

Claims 1 – 3 and 19 – 24 are rejected under 35 U.S.C. 102(a) as being anticipated by Suzuki et al (JP 2001-075032).

Regarding claims 1, 3, 19, and 20, Suzuki et al teaches scanning optics (Figure 1) comprising: first optics (reference 2) for coupling a light beam issuing from a light source (reference 1); second optics (reference 3) for condensing the light beam output from said first optics substantially in a form of a line elongated in a main scanning direction (Figure 2B); a deflector (reference 5) including reflection faces (reference 5a), which adjoin a position where the light beam is condensed in the form of a line (Figure 2B), for deflecting said light beam with said reflection faces; and third optics (reference 6) for condensing the light beam deflected by said deflector toward a surface (reference 7) to be scanned to thereby form a beam spot on said surface for optically scanning said surface; wherein said third optics includes at least one focusing element formed of resin (translation paragraph 0009 lines 19 – 21); said second optics includes at least one focusing element formed of resin and at least one focusing element formed of glass (translation paragraph 0013 lines 1 – 2), at least one surface of said second optics comprises a non-arcuate auxiliary surface non-arcuate in a section in a subscanning direction (claim 5), and among said focusing elements of said second optics, a focusing element formed of resin on which the light beam output from said first optics is transmitted with a maximum diameter in the subscanning direction comprises said at least one non-arcuate auxiliary surface (Since the light beam output from the first optics is incident only on the first surface of the first focusing element of the second optics, it must be transmitted with a maximum diameter in the subscanning direction. Further, Suzuki et al teaches that the first surface of the first focusing

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element of the second optics is a non-arcuate auxiliary surface, specifically Surface 1 of lens 3a (Figures 1 – 2B and translation paragraphs 0023 – 0026).

Regarding claim 2, Suzuki et al teaches said third optics includes at least one non-arcuate auxiliary surface (translation paragraph 0023).

Regarding claims 21 and 23, Suzuki et al teaches optical scanning device comprising scanning optics as described above. Suzuki et al further teaches an image forming apparatus including an optical scanning device for scanning an image carrier (translation paragraph 0001).

Regarding claims 22 and 24, Suzuki et al teaches said image carrier comprises a photoconductive element, and said optical scanning device forms a latent image on said photoconductive element (translation paragraph 009 lines 16 – 17).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 4 – 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Suzuki et al.

Regarding claims 4, 5, 7, and 8, Suzuki et al teaches said second optics comprises a single lens formed of resin and a single lens formed of glass (translation paragraph 0013 lines 1 – 2), said single lens (reference 3a) formed of resin adjoin said first optics (reference 2) and have negative power in the subscanning direction (Figure 2B), said single lens (reference 3b) formed of glass adjoins said deflector (reference 5) and has positive power in the subscanning direction

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(Figure 2B), and the single lens formed of resin has power in the main scanning direction opposite to power of said focusing element (reference 6a and 6b) of said third optics formed of resin in the main scanning direction (Figure 2A shows the single lens formed of resin has negative power in the main scanning direction, Figure 1 shows the focusing element of the third optics formed of resin has positive power in the main scanning direction). Suzuki et al does not teach that the second optics comprises two lenses formed of resin and one lens formed of glass.

It would have been obvious to one of ordinary skill at the time of the invention to replace the single lens formed of resin of Suzuki et al with two lenses formed of resin of equal total power in order to provide additional lens surfaces for use in reducing any optical aberrations.

Regarding claims 6 and 9, Suzuki et al teaches said third optics includes at least one non-arcuate auxiliary surface (translation paragraph 0023).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Denise S Allen whose telephone number is (571) 272-2305. The examiner can normally be reached on Monday - Friday, 9:00am - 5:30pm.

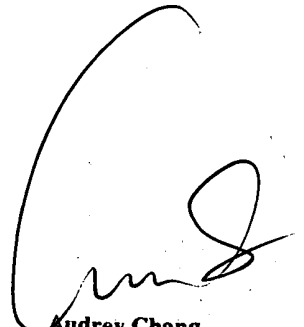
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Drew A Dunn can be reached on (571) 272-2312. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


dsa

Denise S Allen
Examiner
Art Unit 2872


Audrey Chang
Primary Examiner
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